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APPLICANT : AGENCY OF IND SCIENCE & TECHNOL;

INVENTOR : FUJIWARA YUKIHIKO;

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TITLE : MOLDED HIGH POLYMER ARTICLE HAVING CHITOSAN COMPONENT ON SURFACE

ABSTRACT : PURPOSE: To obtain the title molded high polymer article, by immobilizing a chitosan component on the surface of a molded high polymer article through covalent bonds, having good mechanical strength and biocompatibility and suitably used in an artificial blood vessel, artificial skin, cell cultivation bed, etc.

CONSTITUTION: A chitosan component (chitosan and various modified substances thereof) is dissolved in a dilute aqueous solution of an acid and pH is adjusted. A reagent capable of generating nitrene or carbene is added thereto to give a coating solution containing 0.1-3wt% chitosan concentration and 0.1-20wt% acid concentration, which is applied to a molded high polymer articles, e.g. polyethylene fiber, tube, etc.) and dried. The resultant surface is then irradiated with light to react the compound capable of generating nitrene (carbene) with amino groups in the chitosan component. Thereby a modified chitosan having azide groups (diazo groups) is formed and the nitrene (carbene) is generated by irradiation with light to form covalent bonds between the chitosan component and the molded high polymer article.

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